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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,669	04/02/2004	Sung Kyu Lee	P-0656	1016
34610	7590	07/05/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			RAO, ANAND SHASHIKANT	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,669	LEE, SUNG KYU	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/9/06</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chien et al., (hereinafter referred to as “Chien”).

Chien discloses a block error compensating apparatus (Chien: figure 4) comprising: a video codec decoder for decoding an inputted image frame and outputting a decoded image signal (Chien: column 3, lines 25-45); and an error concealment block for detecting an error-generated block in the decoded image frame (Chien: column 3, lines 45-55), compensating the detected error block through a median filter (Chien: column 11, lines 10-20), and outputting a compensated image frame (Chien: column 9, lines 40-60), as in claim 1.

Regarding claim 2, Chien discloses wherein the error concealment block comprises: an error detection block for detecting an error-generated block in the inputted image frame (Chien: column 3, lines 15-23); an error refinement block for confirming whether the detected block is an

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error block based on a pixel value of the detected block and pixel values of blocks adjacent to the detected block (Chien: column 4, lines 1-17); an error correction filter for compensating the confirmed error block through a median filter to create a compensated block (Chien: column 11, lines 10-20); and a frame generation block for restoring an image frame including the compensated block (Chien: column 9, lines 40-60), as in the claim.

Regarding claims 3-5, Chien discloses wherein the error refinement block confirms whether the detected block is an error block by averaging pixel values of blocks adjacent to the detected error block to obtain an average value, obtaining an absolute value for a difference between the comparing the absolute value with a predetermined value (Chien: column 7, lines 1-17), as in the claims.

Regarding claim 6, Chien discloses wherein said error correction filter averages pixel values of the blocks adjacent to the detected error block (Chien: column 7, lines 1-17) through the median filter to obtain an average value, and compensates a pixel value of the detected block the average value (Chien: column 11, lines 10-20), as in the claim.

Chien discloses a block error compensating method of an image frame (Chien: figures 3 and 7) comprising: decoding an inputted image frame and outputting a decoded image signal (Chien: column 3, lines 25-45); detecting an error-generated block in the decoded image frame (Chien: column 3, lines 45-55), compensating the detected error block through a median filter (Chien: column 11, lines 10-20), and outputting a compensated image frame (Chien: column 9, lines 40-60), as in claim 7.

Regarding claim 8, Chien discloses wherein the method includes: detecting an error-generated block in the inputted image frame (Chien: column 3, lines 15-23); confirming whether

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the detected block is an error block based on a pixel value of the detected block and pixel values of blocks adjacent to the detected block (Chien: column 4, lines 1-17); compensating the confirmed error block through a median filter to create a compensated block (Chien: column 11, lines 10-20); and restoring an image frame including the compensated block (Chien: column 9, lines 40-60), as in the claim.

Regarding claims 9-11 and 13, Chien discloses wherein the confirming confirms whether the detected block is an error block by averaging pixel values of blocks adjacent to the detected error block to obtain an average value, obtaining an absolute value for a difference between the comparing the absolute value with a predetermined value (Chien: column 7, lines 1-17), as in the claims.

Regarding claim 12, Chien discloses wherein said error correction filter averages pixel values of the blocks adjacent to the detected error block (Chien: column 7, lines 1-17) through the median filter to obtain an average value, and compensates a pixel value of the detected block the average value (Chien: column 11, lines 10-20), as in the claim.

Chien discloses a system for process moving image data (Chien: figure 4), comprising: an error detection block for detecting an error-generated block in the inputted image frame (Chien: column 3, lines 15-23); an error refinement block for confirming whether the detected block is an error block based on a pixel value of the detected block and pixel values of blocks adjacent to the detected block (Chien: column 4, lines 1-17); an error correction filter for compensating the confirmed error block through a median filter to create a compensated block (Chien: column 11, lines 10-20); and a frame generation block for restoring an image frame including the compensated block (Chien: column 9, lines 40-60), as in claims 14-15.

Regarding claim 16, Chien discloses wherein the processing of the moving picture image data occurs without re-receiving the decoded image frame to compensate for the error block (Chien: column 5, lines 10-20), as in the claim.

Regarding claim 17, Chien discloses wherein the processing of the moving picture image data occurs without performing a motion estimation process and a motion compensation process for the image frames adjacent to the decoded image frame to compensate the error block (Chien: column 4, lines 35-45), as in the claim.

Regarding claim 18, Chien discloses wherein the decoded frame comprises of one of an I frame or a P frame (Chien: column 7, lines 50-60), as in the claim.

Regarding claim 19, Chien further discloses a codec decoder to output the decoded image frame (Chien: column 5, lines 1-21), as in the claim.

Regarding claim 20, Chien discloses wherein the decoded frame further has a window interface to convert the restored image (Chien: column 3, lines 37-43), as in the claim.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamaguchi discloses a moving picture error concealment method using motion compensation. Kryukov discloses removal of blocking artifacts. Chang discloses a method and apparatus for blocking effect reduction. Kim discloses a method for rectifying channel errors in an image signal. Sun discloses an error concealment apparatus for MPEG-like video data. Choon discloses an error concealment control method. Iwamura discloses a compressed motion picture

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signal expander with error concealment. Ng discloses an error concealment apparatus for a compressed video signal processing system.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

ANDY RAO
PRIMARY EXAMINER

asr
June 23, 2006